

REMARKS/ARGUMENTS

Initially, Applicants would like to express their appreciation to the Examiner for the detailed Official Action provided.

Upon entry of the above amendments, claims 1-37 will have been amended and claims 38-41 will have been added. Claims 1-41 are currently pending. Applicants respectfully request reconsideration of the outstanding rejections, and allowance of all the claims pending in the present application.

In the Official Action, the Examiner has rejected claims 1-16, 32-35 and 37 under 35 U.S.C. § 103(a) as being unpatentable over LEHRKE (U.S. Patent No. 4,501,952) in view of SIROVICH et al. (U.S. Patent No. 5,797,414);

the Examiner has rejected claims 17-31 and 36 under 35 U.S.C. § 103(a) as being unpatentable over LEHRKE and SIROVICH, and further in view of Japanese Doc. No. 322713 (“JP ‘713”); and

the Examiner has rejected claim 37 under 35 U.S.C. § 103(a) as being unpatentable over LEHRKE and SIROVICH, and further in view of Japanese Doc. No. 106669 (“JP ‘669”).

Without acquiescing to the propriety of the Examiner’s rejections, Applicants have amended independent claim 1 solely in order to expedite prosecution of the present application.

In this regard, Applicants submit that LEHRKE, SIROVICH, JP ‘713, and JP ‘669, alone or in any properly reasoned combination, fail to disclose the combination of elements as recited in claim 1.

In particular, claim 1 sets forth a fluid heating device including, inter alia, a turbulent flow generation mechanism comprising a part which is configured to slide and vibrate such that a turbulent flow is generated in at least a part of the flow path.

Applicants submit that the applied prior art, alone or in any properly reasoned combination, lacks any disclosure of at least the above noted combination of elements.

In setting forth the above-noted rejections, the Examiner asserts that LEHRKE discloses, inter alia, the presently claimed turbulent flow generation mechanism. In this regard, the Examiner takes the position that “any turbulent flow mechanism is vibratable, just by the nature of turbulent flow” (see, the last line beginning on Page 2 of the Official Action).

Contrary to the Examiner’s assertion, Applicants submit that the presently claimed fluid heating device is very differently structurally from LEHRKE.

More specifically, Applicants submit that LEHRKE discloses affixing a baffle 32 to the fluid mixer 12 (which the Examiner considers to be equivalent to the presently claimed turbulent flow mechanism), which would apparently prevent the fluid mixer 12 from sliding, as well as vibrating (see, Fig., 3A).

Additionally, Applicants submit that the Examiner’s assertion that “any turbulent flow mechanism is vibratable” is erroneous. For example, Applicants submit that, contrary to the Examiner’s aforementioned assertion, the mere extension of an element which into a fluid flow path may be sufficient to cause turbulence in the flow. However, the applied prior art does not disclose any of the advantages associated with the presently claimed turbulent flow mechanism which is configured to both slide and vibrate to generate turbulent flow in a fluid flow path.

Further, Applicants submit that SIROVICH, JP '713, and JP '669, do not provide any teachings which can reasonably be considered to supply the above-noted deficiencies of LEHRKE.

Thus, Applicants submit that none of the applied prior art, including LEHRKE, discloses at least the presently claimed turbulent flow generation mechanism comprising a part which is configured to slide and vibrate such that a turbulent flow is generated in at least a part of the flow path, as generally recited in claim 1.

Applicants further submit that independent claims 32, 36 and 37 are generally similar to independent claim 1 in that they each generally recite, inter alia, a turbulent flow generation mechanism configured to slide and vibrate such that a turbulent flow is generated in at least a part of each of the plurality of flow paths.

Accordingly, Applicants submit that the rejection of claims 32, 36 and 37 (as well as the claims depending therefrom) under 35 U.S.C. § 103(a) is improper for reasons generally similar to claim 1, and withdrawal thereof is respectfully requested.

Applicants also submit that newly-added claims 38-41 recite additional features of the presently claimed invention and find support in at least page 37, lines 15-18, of the present Specification.

In view of the arguments herein, Applicants submit that independent claims 1, 32, 36 and 37 are in condition for allowance. With regard to dependent claims 2-31, 33-35 and 38-41, Applicants submit that they are allowable on their own merit for the features recited therein, as well as because they depend from independent claims 1, 32, 36 and 37 which Applicants have shown to be allowable.

Thus, it is respectfully submitted that all of the claims in the present application are clearly patentable over the references cited by the Examiner, either alone or in combination, and an indication to such effect is respectfully requested, in due course.

SUMMARY

Applicants submit that the present application is in condition for allowance, and respectfully request an indication to that effect. Applicants have argued the allowability of the claims and pointed out deficiencies of the applied references. Accordingly, reconsideration of the outstanding Official Action and allowance of the present application and all the claims therein are respectfully requested and is now believed to be appropriate.

Applicants submit that this amendment is being made to advance prosecution of the application to allowance and should not be considered as surrendering equivalents of the territory between the claims prior to the present amendment and the amended claims. Further, no acquiescence as to the propriety of the Examiner's rejection is made by the present amendment. All other amendments to the claims which have been made in this amendment, and which have not been specifically noted to overcome a rejection based upon the prior art, should be considered to have been made for a purpose unrelated to patentability, and no estoppel should be deemed to attach thereto.

Should the Examiner have any questions, the Examiner is invited to contact the undersigned at the below-listed telephone number.

Respectfully submitted,  
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